

CLAIMS

[43] There is claimed:

1. A process for the continuous production of coke, which comprises:
(a) providing a means for heating petroleum residuum to a temperature within the range from about 850 – 1000 degree F., (b) transferring the resulting heated petroleum residuum to a vessel, (c) releasing of vapors within said vessel, (d) wherein the residence time of the remaining petroleum residuum is less than 5 minutes within said vessel, transferring the remaining petroleum residuum from near the bottom of said vessel to a reactor vessel, (e) operating said reactor vessel under pressure ranging from about 4 psia to 65 psia, (f) mixing and kneading within said reactor vessel to promote devolatilization, carbonization and formation of coke, (g) providing a means for cooling the resulting coke product to a range from about 100 – 250 degrees F and (h) transporting the resulting coke.
2. The process of claim 1 wherein the mixing and kneading step occurs by using a reactor vessel with a single agitation shaft and with an inlet for the remaining petroleum residuum and an outlet for the resulting coke product, and multi-vapor outlets.
3. The process of claim 1 wherein the mixing and kneading step occurs by using a reactor vessel with multiple agitation shafts, including a main agitator shaft and a cleaning agitator shaft, so that the shafts continuously scrape the resulting coke from the reactor as well as from each of the agitation shafts.
4. The process of claim 1 wherein an amount of air or oxygen may be added to said reactor vessel thereby increasing the temperature and hence the rate of cracking reactions and carbonization reactions.
5. The process of claim 1 wherein the means for cooling the resulting coke is provided with either air or closed circuit cooling water.
6. The process of claim 1 wherein the means for cooling the resulting coke is provided by applying water directly to the resulting coke and forming a coke slurry.